

# ABANDONED OIL & GAS WELLS

## At a Glance

Number of abandoned  
oil and gas wells  
U.S. . . . . 343,000  
Kentucky . . . . . 7,875

Number of wells  
plugged each year by  
state . . . . . 200

Abandoned wells  
plugged to date by  
state . . . . . 1,505

## Indicator 11. Abandoned Oil and Gas Wells

**Background** According to the Interstate Oil and Gas Compact Commission, there are an estimated 343,030 idle wells in the United States that require proper plugging.<sup>1</sup> State law requires the Department of Mines and Minerals to regulate the plugging of all oil and gas wells in Kentucky. Administrative regulations promulgated under this authority identify the minimum acceptable requirements to plug or temporarily abandon wells. Unless written permission is obtained from the department, no operator or owner shall permit any well drilled for oil, gas, salt water disposal or any other purpose in connection with the production of oil and gas to remain unplugged after such well is no longer used for the purpose for which it was drilled or converted.

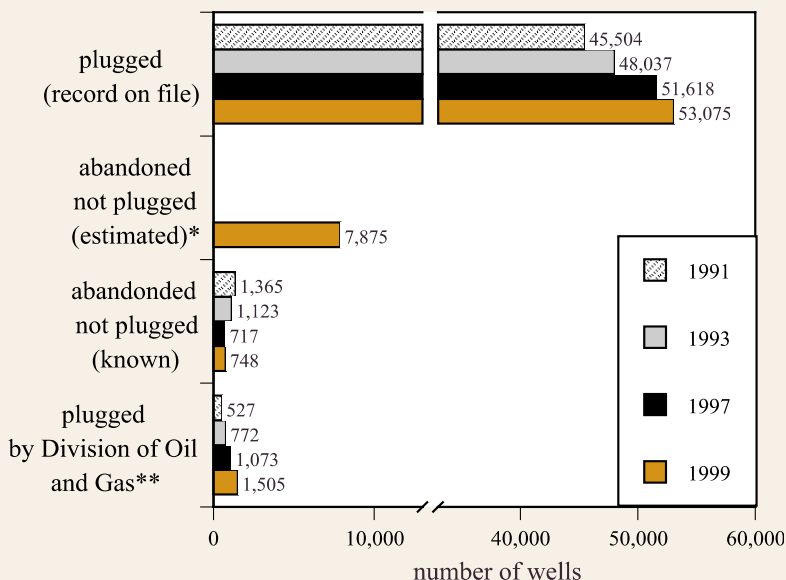
There are an estimated 7,875 abandoned oil and gas wells in Kentucky.<sup>2</sup> Improperly abandoned oil, gas and exploration wells pose a potential threat to the quality of groundwater supplies. Proper abandonment procedures require installation of cement plugs in the bore-hole to prevent migration of toxic fluids into nearby water-bearing formations. In some cases, however, plugs are installed improperly or neglected entirely, allowing oil, gas, brine and other unwanted material to contaminate freshwater aquifers.<sup>3</sup>

**Goal** Foster conservation and exploration, protect the rights of land and mineral owners, and regulate construction/operation of oil and gas wells.

**Progress** State records reveal that more than 53,000 oil and gas wells have been plugged in Kentucky. During 1997, 1998 and 1999, an average of 485 wells was closed and plugged per year.

State efforts to plug abandoned oil and gas wells continue. The plugging of abandoned oil and gas wells is funded with interest money accrued from oil and gas reclamation bonds and bond forfeitures. The interest generally raises \$400,000 a year—enough money to plug about 200 wells. As of 1999, the Division of Oil and Gas had plugged 1,505 abandoned oil and gas wells. Abandoned wells are prioritized and plugged based on potential hazards to the

**Measure 1. Number of Plugged and Abandoned Oil and Gas Wells in Kentucky**



# RESOURCE EXTRACTION

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environment. The average plugging cost is about \$1,973 per well.<sup>4</sup>

The U.S. Environmental Protection (EPA) currently permits and regulates the injection of fluids and disposal of brine produced by oil and gas wells. There are 1,667 underground injection wells permitted in Kentucky. Another 1,645 wells are permitted but inactive. The Underground Injection Control program reports that a cumulative total of 2,288 injection wells in Kentucky have been closed and plugged to date. During 2000, 26 enforcement actions were taken by the U.S. EPA against operators for failure to comply with underground injection well rules.

### Footnotes

1. Press Release, Interstate Oil and Gas Compact Commission, August 2, 2000.
2. As estimated by the Ky. Division of Oil and Gas.
3. "Abandoned Wells Pose Threat to Water Quality," R. F. Kubichek, Associate Professor, J. C. Cupal, Associate Professor, S. Choi, Ph. D. Candidate, Electrical Engineering Department, University of Wyoming, January 1999.
4. Ky. Division of Oil and Gas.

### Measures - notes and sources

**Measure 1.** \*Data revised by Ky. Division of Oil & Gas that appeared in previous State of Kentucky's Environment reports. \*\*Cumulative total of oil and gas wells plugged by the Ky. Division of Oil & Gas. Source: Ky. Department of Mines and Minerals.

**Measure 2.** U.S. Environmental Protection Agency.

**Measure 2. Underground Injection (UIC) Wells in Kentucky**

